FIG. 1

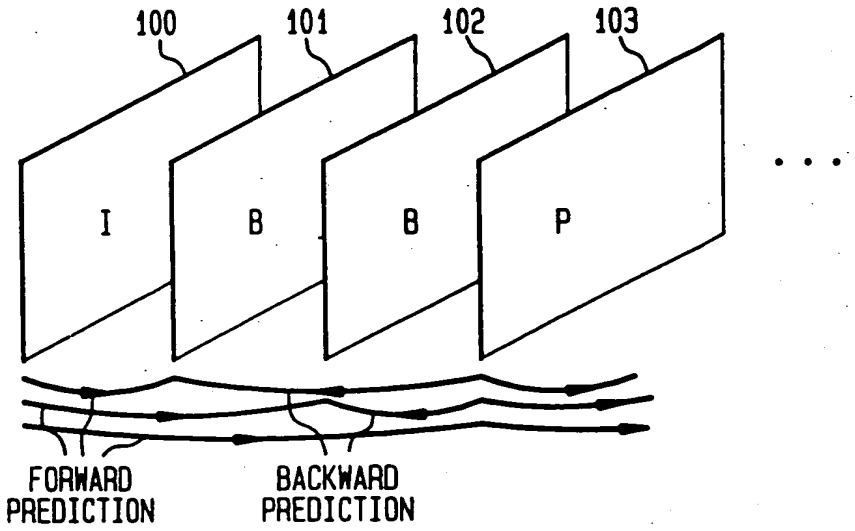
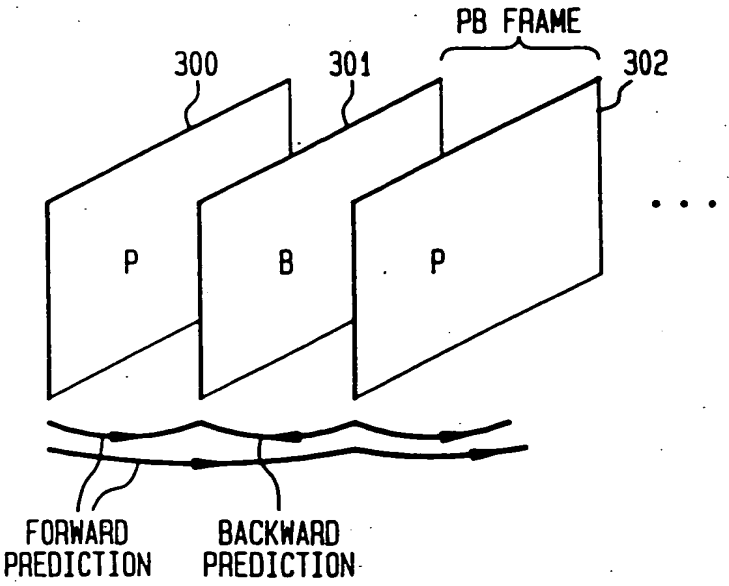

100
101
102
103
I
B
B
P
FORWARD PREDICTION
BACKWARD PREDICTION

FIG. 3


PB FRAME
300
301
302
P
B
P
FORWARD PREDICTION
BACKWARD PREDICTION

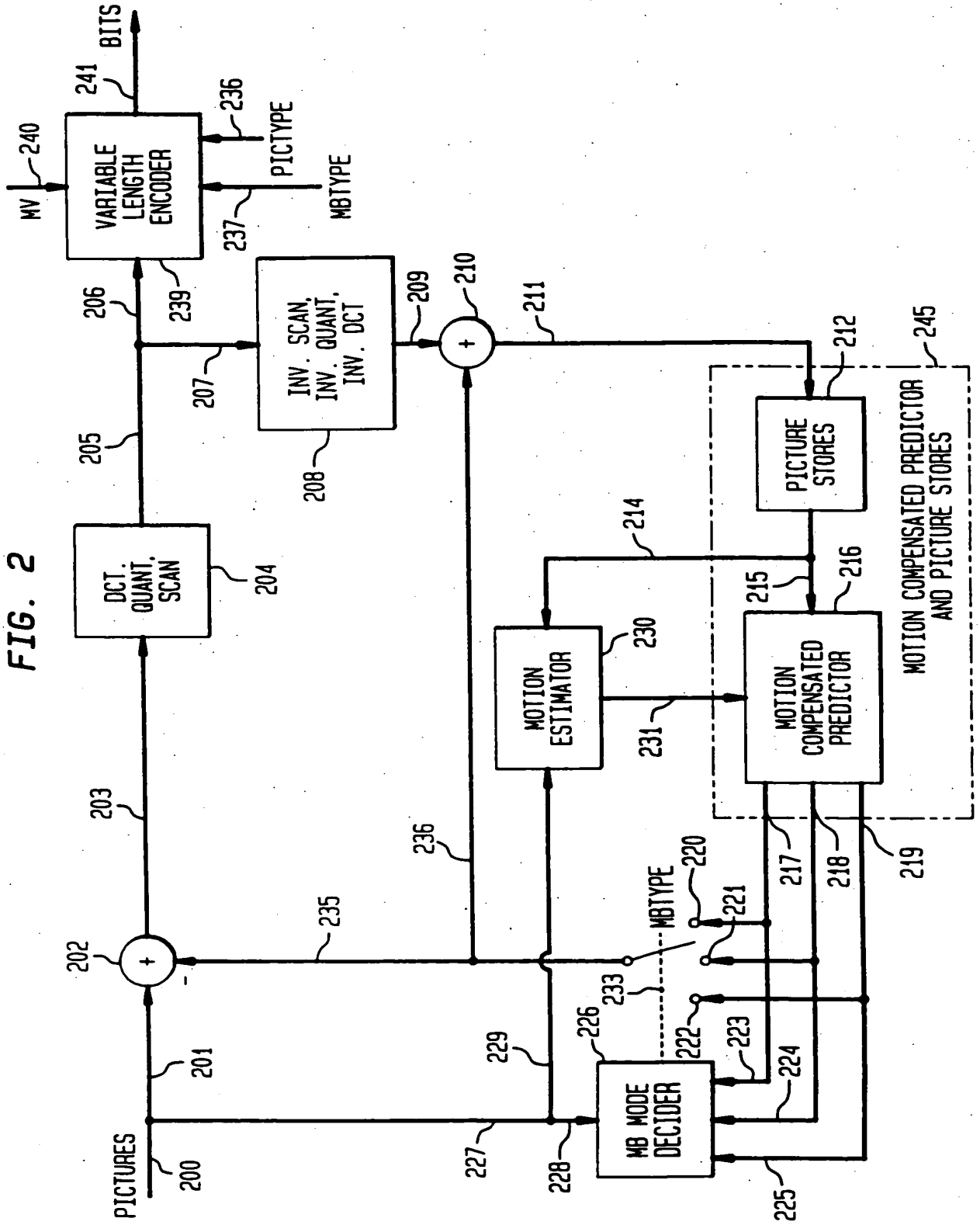

PICTURES
200
201
202
+
-
203
DCT. QUANT. SCAN
204
205
206
207
INV. SCAN, INV. QUANT, INV. DCT
208
209
210
+
211
212
PICTURE STORES
214
215
216
MOTION ESTIMATOR
230
231
MOTION COMPENSATED PREDICTOR
MOTION COMPENSATED PREDICTOR AND PICTURE STORES
217
218
219
220
221
MBTYPE
222
223
224
225
226
MB MODE DECIDER
227
228
229
233
235
236
239
VARIABLE LENGTH ENCODER
240
MV
241
BITS
236
PICTYPE
237
MBTYPE

FIG. 2

FIG. 4

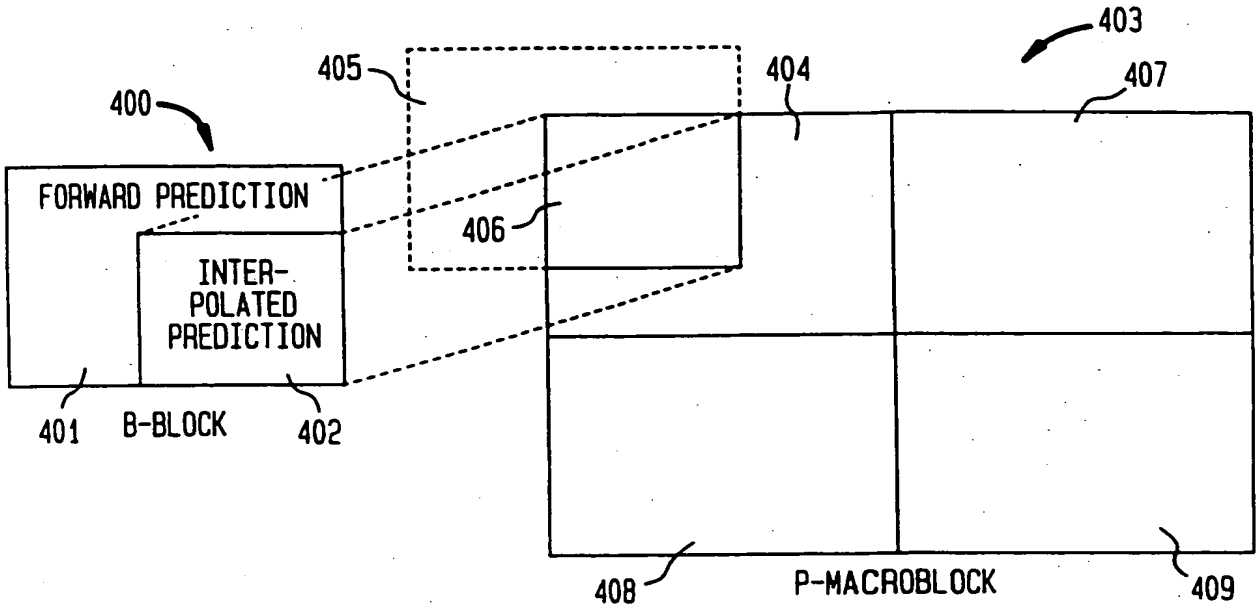

403
405
404
407
400
FORWARD PREDICTION
406
INTER-
POLATED
PREDICTION
401
B-BLOCK
402
408
P-MACROBLOCK
409

FIG. 5

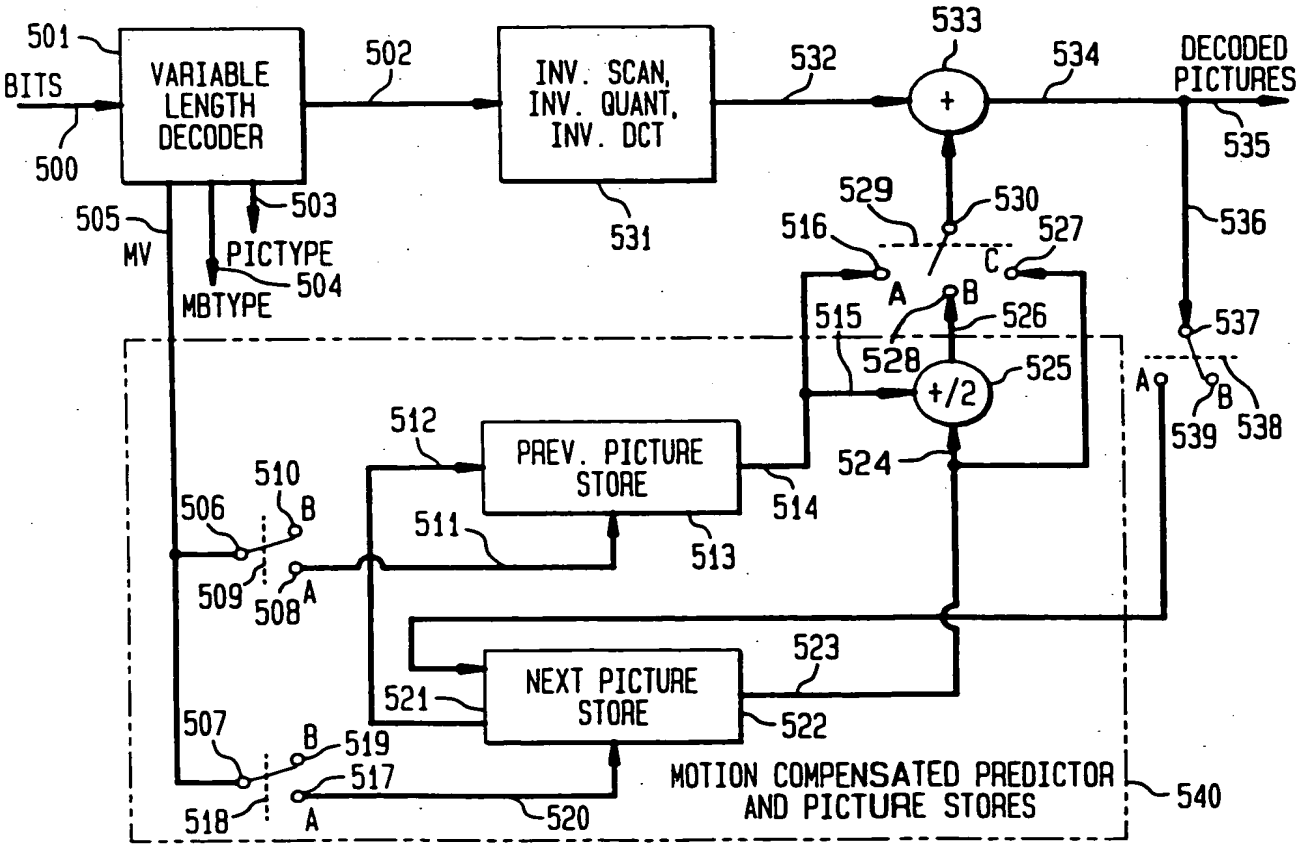

501
BITS
500
VARIABLE
LENGTH
DECODER
502
INV. SCAN,
INV. QUANT,
INV. DCT
531
532
533
+
534
DECODED
PICTURES
535
536
537
539
538
503
505
MV
PICTYPE
504
MBTYPE
529
530
516
527
C
A
B
515
526
528
+/2
525
524
512
PREV. PICTURE
STORE
514
513
510
506
B
511
509
508
A
523
NEXT PICTURE
STORE
521
522
507
B
519
517
518
A
520
MOTION COMPENSATED PREDICTOR
AND PICTURE STORES
540

FIG. 6

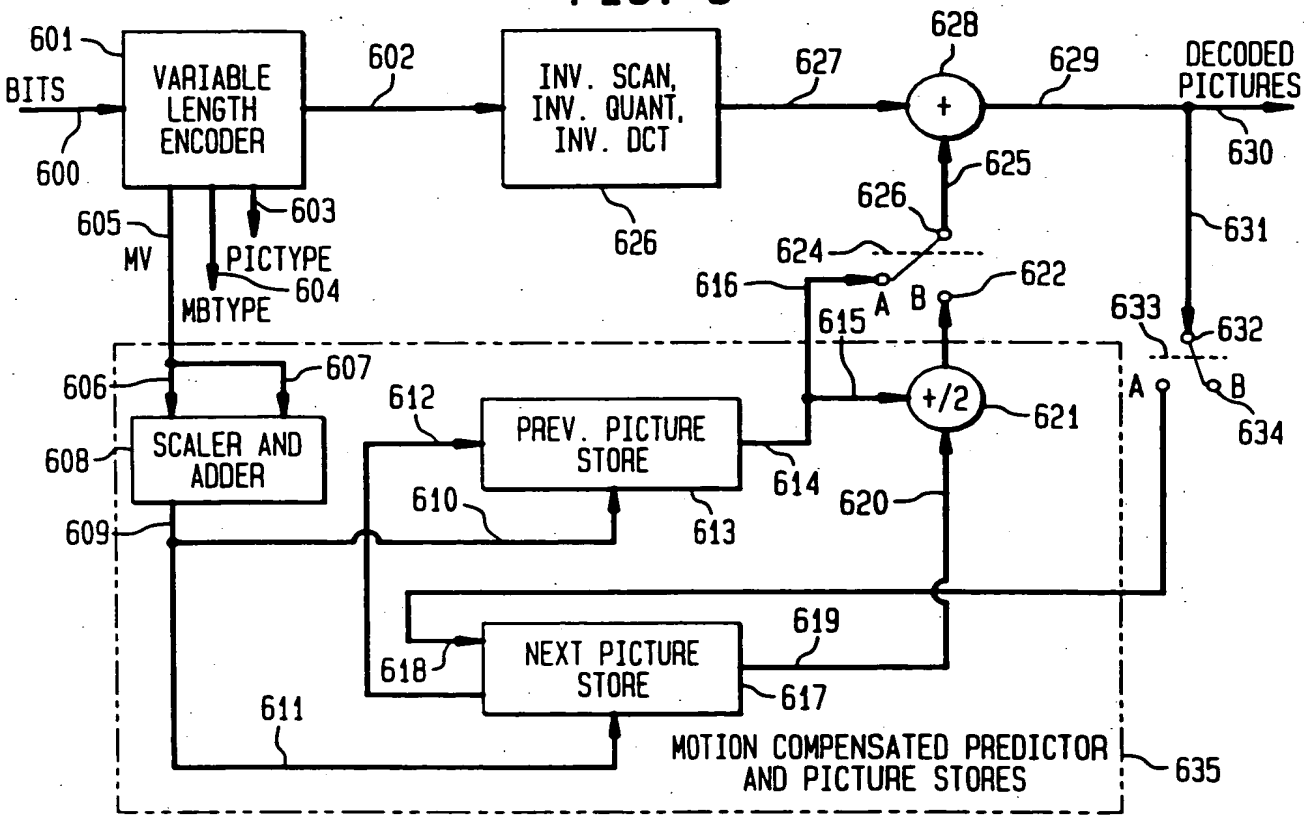

601
BITS
600
VARIABLE LENGTH ENCODER
602
INV. SCAN, INV. QUANT, INV. DCT
627
628
+
629
DECODED PICTURES
630
625
626
631
605
MV
603
PICTYPE
604
MBTYPE
626
624
616
A
B
622
615
633
632
606
607
612
PREV. PICTURE STORE
+/2
621
A
B
634
608
SCALER AND ADDER
614
620
610
613
609
619
618
NEXT PICTURE STORE
617
611
MOTION COMPENSATED PREDICTOR AND PICTURE STORES
635

FIG. 7

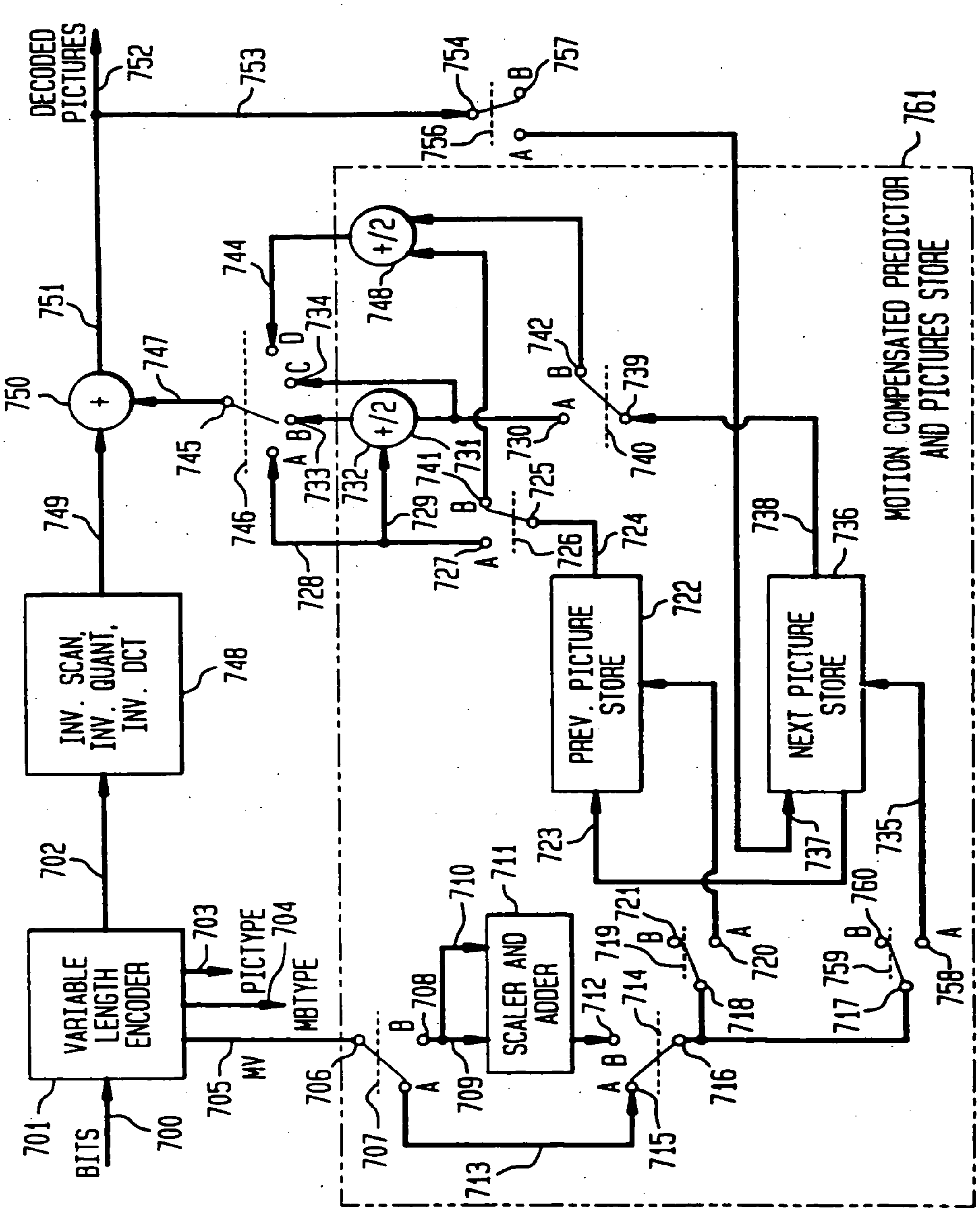

DECODED PICTURES
BITS
VARIABLE LENGTH ENCODER
INV. SCAN, INV. QUANT, INV. DCT
PICTYPE
MBTYPE
MV
SCALER AND ADDER
PREV. PICTURE STORE
NEXT PICTURE STORE
MOTION COMPENSATED PREDICTOR AND PICTURES STORE
+/2
+/2
+

FIG. 8

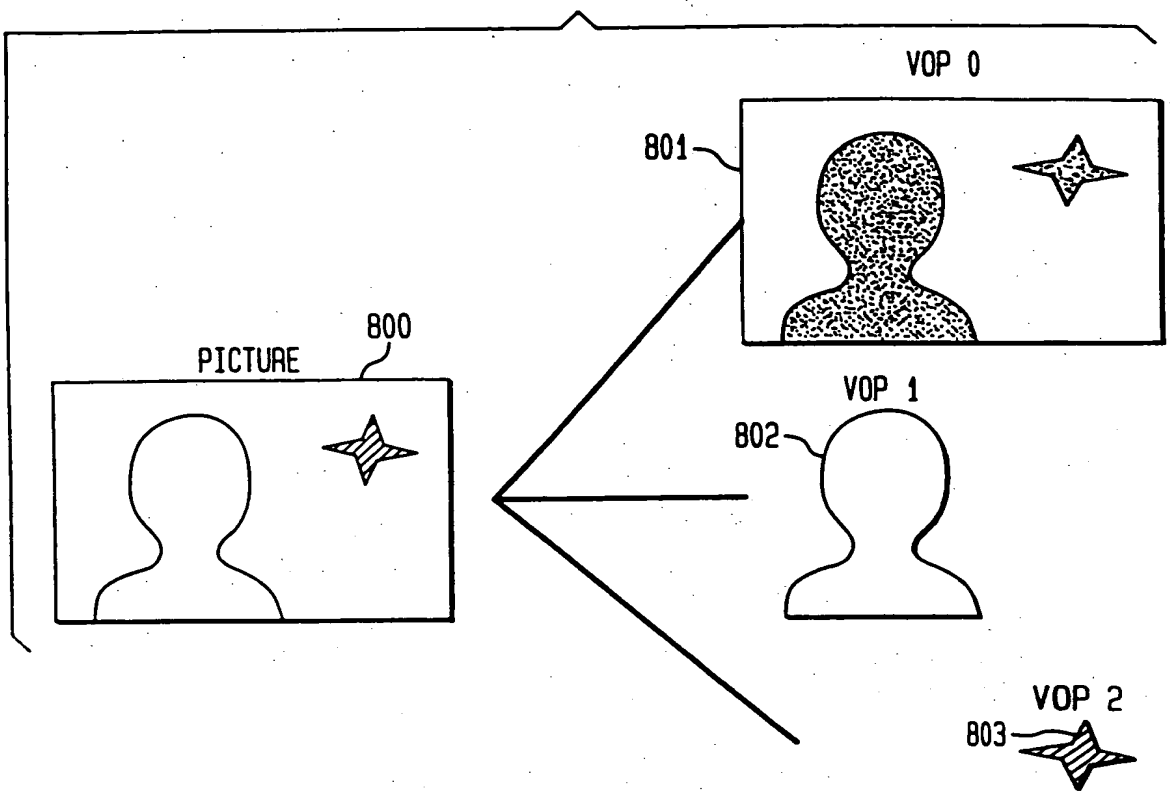

VOP 0
801
PICTURE
800
VOP 1
802
VOP 2
803

FIG. 9

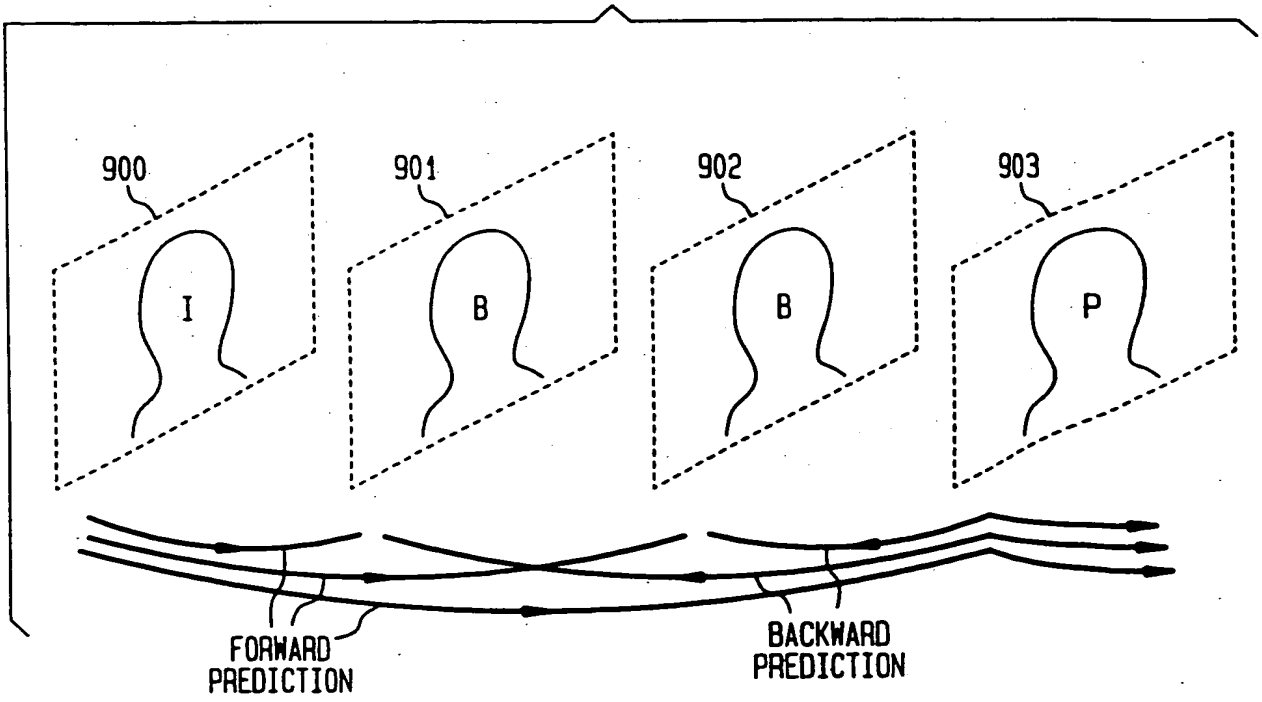

900
901
902
903
I
B
B
P
FORWARD PREDICTION
BACKWARD PREDICTION

FIG. 10

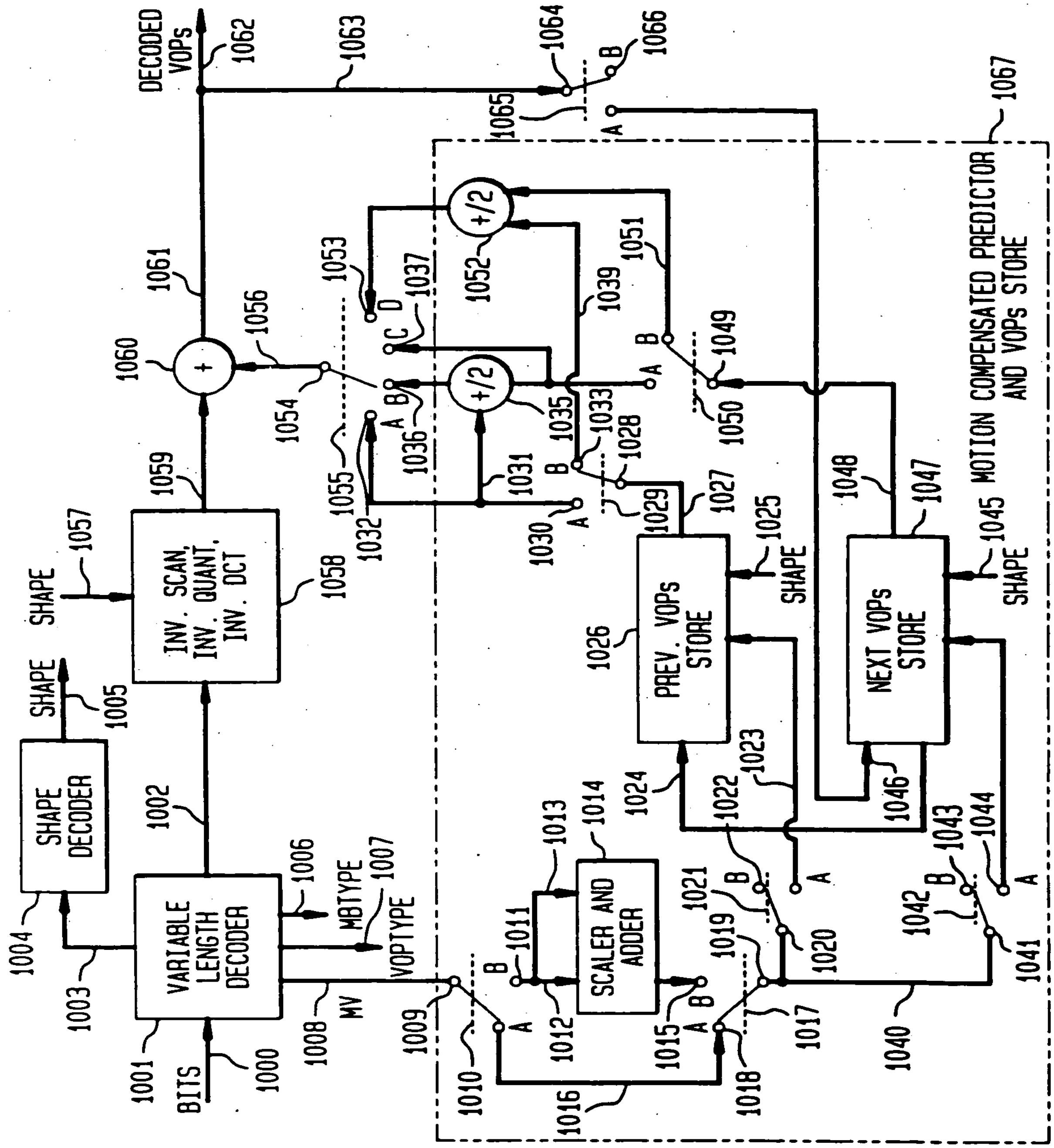

BITS
VARIABLE LENGTH DECODER
SHAPE DECODER
SHAPE
MBTYPE
VOPTYPE
MV
INV. SCAN, INV. QUANT, INV. DCT
DECODED VOPs
SCALER AND ADDER
PREV. VOPs STORE
NEXT VOPs STORE
+/2
MOTION COMPENSATED PREDICTOR AND VOPs STORE
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1026
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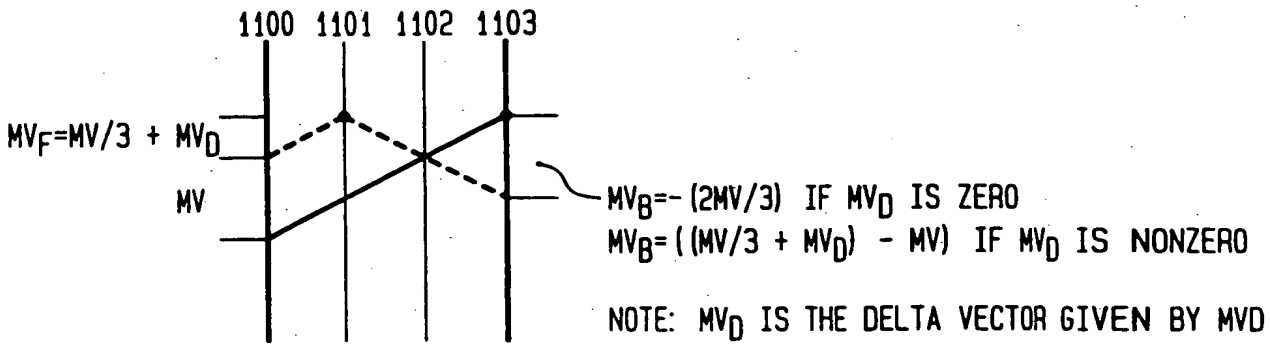
FIG. 11


1100
1101
1102
1103
$MV_F=MV/3 + MV_D$
MV
$MV_B=-(2MV/3)$ IF MV_D IS ZERO
$MV_B=((MV/3 + MV_D) - MV)$ IF MV_D IS NONZERO
NOTE: MV_D IS THE DELTA VECTOR GIVEN BY MVD